

ABSTRACT

An arrangement for the storage of marketable quantities of crude oil at a semi-submersible floating production vessel. The storage is achieved by hanging a segmented reinforced concrete tank to the underside of the semi-submersible vessel. The semi-submersible vessel can be an existing semi-submersible drilling rig. By maintaining the mass of the tank and contents slightly greater than the displacement of the tank and by arranging the centre of gravity of the tank below its centre of buoyancy, the metacentric height of the semi-submersible vessel is approved. The storage arrangement for the oil provides the necessary maintenance of mass by either storing approximately 4/5 of the oil in oil-over-water chambers and approximately 1/5 in gas-over-oil chambers or by using a gas-over-oil-over-water arrangement in all the chambers. The piping arrangements minimize the free surface of liquids in the tank.